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START THE MOSQUITO WAR NOW

A radio talk by F. C. Bishopp, Bureau of Entomology, delivered through WRC and 42 other radio stations associated with the National Broadcasting Company, June 3, 1931.

Fellow Sufferers:

Swatting mosquitoes is not the most enjoyable pastime in the world, nor is a mosquito concert at night the most enchanting music, yet we continue to indulge in this sort of entertainment. Isn't it surprising how much misery we will endure when by well directed effort and a moderate outlay of money we might be able to fully enjoy our gardens and terraces and sleep without the odor of citronella or the oppressiveness of a mosquito bar.

I do not want to lead you to think that all mosquito control problems are simple and inexpensive, but a large part of the annoyance caused by these pests can be avoided by such simple means.

As probably every one of my audience knows, mosquitoes are not only annoying but many of them are dangerous as they are the sole carriers of such diseases as malaria, yellow fever, dengue or breakbone fever, and the disease called filiariasis, caused by a minute worm.

The presence of great plagues of mosquitoes and of malaria have a far-reaching economic effect on a community; development is retarded, agricultural and industrial output is reduced and land values are lowered, so you can see that there are abundant reasons for individual, community, state and even national action against these foes.

To fight intelligently we must know something about the enemy and its methods. There are many different kinds of mosquitoes and their habits are vastly different. In one important way, however, they are all alike, that is, they all pass their "wiggle-tail" stage in water. This is the stage in which we can fight them most effectually.

In the absence of water suitable for "wiggle tails" to develop in we have no mosquitoes, or if we apply oil to the water the "wiggle tails" are destroyed.

The house mosquitoes cause much annoyance in all parts of the country. Fortunately, their breeding is very easily prevented. These mosquitoes breed in close proximity to homes in any vessel which will hold water for ten days. Rain barrels and cisterns should be screened if they are to be used. Cesspools, oil wells, tin cans, and defective eave troughs may produce an almost incredible number of these pestiferous insects.

In towns, sewer traps, and fire buckets and barrels have been known to produce a real scourge of mosquitoes. Careful search of every premise and the elimination or oiling of the water is essential if we would have comfort.

In parks and rural districts, woodland and roadside pools must be

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drained or oiled if they are not kept free from debris and stocked with top minnows. Open lakes or ponds with clean straight banks are seldom important mosquito breeding places for the wave action and presence of fish usually prevent breeding. Much attention has been directed to the use of Paris green applied with airplanes or dust blowers to ponds and swamp areas. This treatment is most effective against malaria mosquitoes, the wrigglers of which take their food from the surface of the water. The Paris green is mixed with some fine dust, one pound of Paris green to ten pounds dust and applied at the rate of 4 to 10 pounds per acre. The floating particles of poison are taken in by the wrigglers but there is not enough poison on the water to injure fish or live stock.

For oiling, kerosene is very commonly used but other distillate oils which will spread equally well and are not so volatile are even better. A thin even film over the water will do the work. Under still conditions 1 ounce of oil will cover 15 square feet of surface. The oil may be thrown over the pools with a dipper, but it is better to use a sprayer to distribute it. Usually the oil must be applied every two weeks to prevent all breeding.

Drainage of breeding places has the distinct advantage of more permanently eliminating breeding places, although the initial cost is often considerable. If extensive mosquito breeding areas have to be dealt with, an engineer is necessary and community action usually is required. This is particularly true with the salt marsh areas where certain mosquitoes which breed in salt or brackish waters are concerned.

These salt marsh mosquitoes can fly several miles, hence purely local drainage work cannot be relied upon to give complete relief if other marsh areas are near.

Many questions come to the Department about repellents for mosquitoes. Unfortunately, hungry mosquitoes are not easily driven off. We have found also that there is considerable variation in the way different kinds of mosquitoes respond to repellents and also in the degree of protection afforded different people by a given material. Oil of Citronella is widely used and with fair results. It may be used pure or mixed with mineral oil or vaseline or lanolin, about 1 part to 5. Any oily material on the skin has a repellent effect. Many other materialshave more or less value.

For the protection of the house, properly fitted screens are essential in localities where mosquitoes abound. The screen doors should always open outward and full screens on the windows are much better than half screens. The mesh should be not larger than 16 to the inch.

Kerosene-pyrethrum sprays are very useful in destroying mosquitoes in houses and tents and this material has some repellent value. Many of the fly sprays on the market are essentially this material.

There is no outstanding remedy for mosquito bites. If you must let mosquitoes bite you and if the effect of the bites linger I would suggest that you try rubbing the punctures gently with a moist piece of toilet soap.

In closing I want to strongly emphasize the fact that you can greatly add to your comfort if you will stop mosquito breeding about your houses and that you should take an active interest in community effort toward mosquito control. Farmers' Bulletin 1570 "Mosquito Remedies and Preventives" may help you.